

REMARKS**Status of the Claims**

Claims 1-20 were pending in this application and claims 1-20 are presently under consideration. Claims 1, 13 and 16 are amended, and claim 8 is canceled without prejudice or disclaimer. New claims 21 and 22 are introduced. Support for the claim amendments can be found throughout the specification and claims as originally filed. For example, support for the amendments to claim 1 is found in the specification at paragraphs [0008], [0024], and in claim 8 as originally filed. Support for new claims 21 and 22 is found in claim 13 as originally filed. Accordingly, no new matter is added by these amendments, and entry is requested.

Objection to the Specification

The Examiner has objected to the specification under 37 C.F.R. § 1.75(d)(1) and MPEP § 608.01(o), for allegedly failing to provide proper antecedent basis for the claimed subject matter. The specification has been amended and Applicants respectfully request that the objection be withdrawn.

Rejections under 35 U.S.C. § 112, Second Paragraph

The Examiner has rejected claims 13, 16 and 17 under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention.

Claims 13 and 16 have been amended and new claims 21 and 22 have been introduced to clarify the claimed subject matter. In addition, Applicants respectfully submit that the term “thermoplastic starch” in claim 17 refers to extruded starch. This becomes clear when the specification is read as a whole. For example, the specification at paragraph [0036] states: “In order to prepare a thermoplastic mass of the above described mixture, it is subjected to an

extrusion step.” Therefore, Applicants respectfully request that these rejections under 35 U.S.C. § 112, second paragraph, should be withdrawn.

Rejections under 35 U.S.C. § 102

WO 01/45517

The Examiner has rejected claims 1-10, 12-15, 17, 19 and 20 under 35 U.S.C. § 102(b) as allegedly being anticipated by WO 01/45517. Applicants respectfully traverse this rejection for the reasons set forth below.

The legal standard for anticipation under 35 U.S.C. § 102 is one of strict identity. *Trintec Industries, Inc. v. Top-U.S.A. Corp.*, 63 U.S.P.Q.2d 1597 (Fed. Cir. 2002). To anticipate a claim, a single prior source must contain each and every limitation of the claimed invention. *In re Paulson*, 30 F.3d 1475, 1478-79, 31 USPQ2d 1671, 1673 (Fed. Cir. 1994) (citing *In re Spada*, 911 F.2d 705, 708, 15 USPQ2d 1655, 1657 (Fed. Cir. 1990)). “A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP § 2131.

As an initial matter, claim 1 has been amended to recite a process for preparing a pet's chew from thermoplastic starch. On the other hand, WO 01/45517 describes a process for preparing a pet's chew from thermoplastic protein, instead of thermoplastic starch as claimed in the present invention. As stated in the section from page 2 line 31 to page 3, line 2 of WO 01/45517 (emphasis added):

... The thermoplastic is made from a combination of plant and animal derived proteins. Other ingredients are added to ensure that the animal is provided a full compliment of calories and nutrition. To this end, the edible thermoplastic contains starch, fiber, and a metallic salt hydrate. ...

Therefore, the product of WO 01/45517 is not based on a thermoplastic starch, but rather on thermoplastic proteins. Accordingly, Applicants respectfully submit that WO 01/45517

fails to teach each and every element of the presently claimed invention, and this rejection under 35 U.S.C. § 102(b) should be withdrawn.

EP 0552897

The Examiner has rejected claims 1-4, 6-12, 14, 15, 17, 19 and 20 under 35 U.S.C. § 102(b) as allegedly being anticipated by EP 0552897. Applicants respectfully traverse this rejection for the reasons set forth below.

The legal standard for anticipation has been discussed above. Applicants respectfully submit that EP 0552897 does not describe a process for preparing a pet's chew from a mixture of a starch derivative, a plasticizer and a fibrous material, as recited in the amended claim 1. The starch derivative is defined in the present application: "the starch derivative is a chemically modified starch, preferably an oxidized starch, starch ester (e.g. acetylated starch), starch ether (e.g. hydroxyalkylated starch or carboxymethylated starch), hydrolysed or partially hydrolysed starches or crosslinked starch." Specification at paragraph [0015]. In contrast, EP 0552897 discloses an edible chew product containing cellulosic fibrous material, starch, and proteinaceous binder together with any oral care additive (page 3, lines 19-21). It further describes that a humectant, which is preferably glycerin, may be incorporated at a concentration of about 1-15% by weight (page 4, lines 41-43). No disclosure of a starch derivative can be found.

Therefore, the product of EP 0552897 does not contain a mixture of a starch derivative, a plasticizer and a fibrous material. Accordingly, Applicants respectfully submit that EP 0552897 fails to teach each and every element of the presently claimed invention, and this rejection under 35 U.S.C. § 102(b) should be withdrawn.

Rejections under 35 U.S.C. § 103

The Examiner has rejected claims 11, 16 and 18 under 35 U.S.C. § 103(a) as allegedly being obvious over WO 01/45517 taken with EP 0552897 in view of EP 0838153. Applicants respectfully traverse this rejection for the reasons set forth below.

The initial burden to make a *prima facie* case of obviousness is on the Examiner. *In re Bell*, 991 F.2d 781, 783 (Fed. Cir. 1993). To make a *prima facie* case of obviousness, the teachings of the prior art should have suggested the claimed subject matter to the person of ordinary skill in the art, and all the claim limitations must be taught or suggested in the references cited by the Examiner. *In re Kotzab*, 217 F.3d 1365, 1370 (Fed. Cir. 2000). Moreover, there must be a reasonable expectation of success in achieving the claimed invention based on the teachings found in the prior art. *In re Vaeck*, 947 F.2d 488 (Fed. Cir. 1991).

As discussed above, neither WO 01/45517 nor EP 0552897 teaches or suggests the use of modified starch in thermoplastic starch-based pet chew products. EP 0838153 describes the use of a natural unmodified potato starch product but not modifies starch, but does not cure this deficiency of WO 01/45517 and EP 0552897. Therefore, combining the disclosures of WO 01/45517, EP 0552897 and EP 0838153 does not teach or suggest all the elements of the presently claimed invention.

Evidence of an unobvious or unexpected advantageous property can rebut *prima facie* obviousness. MPEP § 716.02(a). A striking feature of the use of modified starch is that it ensures that the product does not become stiffer and more brittle over time. This is clearly visible when comparing reference samples #1 and #2, with samples #3-6 in Table 1 of the specification. The increase in E-modulus over time of the products prepared in accordance with the present invention (samples #3-6) is much less compared to samples #1 and #2 comprising unmodified starch. This feature is also exemplified by the following additional evidence provided herewith as *Exhibit A*, which shows pictures of injection moulded products according to the compositions of sample #2 and sample #4 of Example 1. Figure 1 below provides two moulded products prepared using the same mould. The product according to sample #2 in Example 1 is shown on the left, whereas on the right is the product according to sample #4 of Example 1. Note the striking difference in length after storage of these two products. Figure 2 below provides surface details of the products, with the product according to sample #2 on the left and the product according to sample #4 on the right. Intricate surface details are still visible in the product comprising the starch derivative, whereas the product based on unmodified starch has such low dimensional stability that surface details begin to fade. This indicates that samples using modified starch do not become stiff and brittle over time.

Neither of the cited documents teaches or suggests that the use of modified starch in thermoplastic starch-based pet chew products, which results in products having improved mechanical properties, such as retention of good flexibility over time and good dimensional stability. Thus, combining the disclosure of WO 01/45517, EP 0552897 and EP 0838153 does not teach or suggest all the limitations of the presently claimed invention, and the unexpected advantages of using a modified starch rebuts the obviousness rejection by the Examiner. Accordingly, Applicants respectfully request that this rejection under 35 U.S.C. § 103(a) should be properly withdrawn.

In the event the U.S. Patent and Trademark Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time and authorizes the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 03-1952** referencing docket no. 313632001800. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account.

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Respectfully submitted,

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